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RAW SEQUENCE LISTING

DATE: 01/07/2003

PATENT APPLICATION: US/10/040,281A

TIME: 16:14:13

Input Set : A:\B129SEQLIST.TXT

Output Set: N:\CRF4\01072003\J040281A.raw

4 <110> APPLICANT: Browning, Jeffrey L.
5 Ware, Carl
7 <120> TITLE OF INVENTION: Lymphotoxin- Beta, Lymphotoxin- Beta
8 Complexes, Pharmaceutical Preparations and Therapeutic Uses
9 Thereof
11 <130> FILE REFERENCE: B129USCP2DV2CN
13 <140> CURRENT APPLICATION NUMBER: 10/040,281A
C--> 14 <141> CURRENT FILING DATE: 2002-12-13
16 <150> PRIOR APPLICATION NUMBER: 08/466,254
17 <151> PRIOR FILING DATE: 1995-06-06
19 <150> PRIOR APPLICATION NUMBER: 08/222,614
20 <151> PRIOR FILING DATE: 1994-04-01
22 <150> PRIOR APPLICATION NUMBER: 07/990,304
23 <151> PRIOR FILING DATE: 1992-12-04
25 <150> PRIOR APPLICATION NUMBER: PCT/US91/04588
26 <151> PRIOR FILING DATE: 1991-06-27
28 <150> PRIOR APPLICATION NUMBER: 07/544,862
29 <151> PRIOR FILING DATE: 1990-06-27
31 <160> NUMBER OF SEQ ID NOS: 23
33 <170> SOFTWARE: FastSEQ for Windows Version 4.0
35 <210> SEQ ID NO: 1
36 <211> LENGTH: 726
37 <212> TYPE: DNA
38 <213> ORGANISM: Homo Sapien
40 <400> SEQUENCE: 1
41 ctggggctgg agggcagggg tgggaggctc caggggaggg gttccctcct gctagctgtg 60
42 gcaggagcca cttctctggt gaccttggtg ctggcggtgc ctatcactgt cctggctgtg 120
43 ctggccttag tgcccagga tcagggagga ctggtaacgg agacggccga ccccggggca 180
44 caggcccagc aaggactggg gtttcagaag ctgccagagg aggagccaga aacagatctc 240
45 agcccgcggc tcccagctgc ccacctcata ggcgctccgc tgaaggggca ggggctaggc 300
46 tgggagacga cgaaggaaca ggcgtttctg acgagcgga cgcagttctc ggacgccgag 360
47 gggctggcgc tcccgcagga cggcctctat tacctctact gtctcgtcgg ctaccggggc 420
48 cgggcgcccc ctggcggcgg ggacccccag ggccgctcgg tcacgctgcg cagctctctg 480
49 taccgggcgg ggggcgccta cgggccgggc actcccgagc tgctgctcga gggcgccgag 540
50 acggtgactc cagtgtctga cccggccagg agacaaggtt acgggcctct ctggtacacg 600
51 agcgtggggt tcggcggcct ggtgcagctc cggaggggcg agagggtgta cgtcaacatc 660
52 agtcaccccg atatggtgga cttcgcgaga ggaagacct tctttggggc cgtgatggtg 720
53 gggatga 726
55 <210> SEQ ID NO: 2
56 <211> LENGTH: 241
57 <212> TYPE: PRT
58 <213> ORGANISM: Homo Sapien
60 <400> SEQUENCE: 2

RAW SEQUENCE LISTING

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Output Set: N:\CRF4\01072003\J040281A.raw

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61 Leu Gly Leu Glu Gly Arg Gly Gly Arg Leu Gln Gly Arg Gly Ser Leu
62 1 5 10 15
63 Leu Leu Ala Val Ala Gly Ala Thr Ser Leu Val Thr Leu Leu Leu Ala
64 20 25 30
65 Val Pro Ile Thr Val Leu Ala Val Leu Ala Leu Val Pro Gln Asp Gln
66 35 40 45
67 Gly Gly Leu Val Thr Glu Thr Ala Asp Pro Gly Ala Gln Ala Gln Gln
68 50 55 60
69 Gly Leu Gly Phe Gln Lys Leu Pro Glu Glu Glu Pro Glu Thr Asp Leu
70 65 70 75 80
71 Ser Pro Gly Leu Pro Ala Ala His Leu Ile Gly Ala Pro Leu Lys Gly
72 85 90 95
73 Gln Gly Leu Gly Trp Glu Thr Thr Lys Glu Gln Ala Phe Leu Thr Ser
74 100 105 110
75 Gly Thr Gln Phe Ser Asp Ala Glu Gly Leu Ala Leu Pro Gln Asp Gly
76 115 120 125
77 Leu Tyr Tyr Leu Tyr Cys Leu Val Gly Tyr Arg Gly Arg Ala Pro Pro
78 130 135 140
79 Gly Gly Gly Asp Pro Gln Gly Arg Ser Val Thr Leu Arg Ser Ser Leu
80 145 150 155 160
81 Tyr Arg Ala Gly Gly Ala Tyr Gly Pro Gly Thr Pro Glu Leu Leu Leu
82 165 170 175
83 Glu Gly Ala Glu Thr Val Thr Pro Val Leu Asp Pro Ala Arg Arg Gln
84 180 185 190
85 Gly Tyr Gly Pro Leu Trp Tyr Thr Ser Val Gly Phe Gly Gly Leu Val
86 195 200 205
87 Gln Leu Arg Arg Gly Glu Arg Val Tyr Val Asn Ile Ser His Pro Asp
88 210 215 220
89 Met Val Asp Phe Ala Arg Gly Lys Thr Phe Phe Gly Ala Val Met Val
90 225 230 235 240
91 Gly

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95 <210> SEQ ID NO: 3

96 <211> LENGTH: 606

97 <212> TYPE: DNA

98 <213> ORGANISM: Homo Sapien

100 <400> SEQUENCE: 3

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101 ctggccttag tgccccagga tcagggagga ctggtaacgg agacggccga ccccggggca 60
102 caggcccagc aaggactggg gtttcagaag ctgccagagg aggagccaga aacagatctc 120
103 agccccgggc tcccagctgc ccacctcata ggcgctccgc tgaaggggca ggggctaggc 180
104 tgggagacga cgaaggaaca ggcgtttctg acgagcgga cgcagttctc ggacgccgag 240
105 gggctggcgc tcccgagga cggcctctat tacctctact gtctcgtcgg ctaccggggc 300
106 cgggcgcccc ctggcggcgg ggacccccag ggccgctcgg tcacgctgcg cagctctctg 360
107 taccgggcgg ggggcgccta cgggccgggc actcccagac tgctgctcga gggcgccgag 420
108 acgtgactc cagtgtgga cccggccagg agacaagggg acgggcctct ctggtacacg 480
109 agcgtggggg tcggcggcct ggtgcagctc cggagggggc agaggggtga cgtcaacatc 540
110 agtcaccccg atatggtgga cttcgcgaga ggaagacct tctttggggc cgtgatggtg 600
111 ggtga

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113 <210> SEQ ID NO: 4

114 <211> LENGTH: 201

RAW SEQUENCE LISTING

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Input Set : A:\B129SEQLIST.TXT

Output Set: N:\CRF4\01072003\J040281A.raw

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115 <212> TYPE: PRT
116 <213> ORGANISM: Homo Sapien
118 <400> SEQUENCE: 4
119 Leu Ala Leu Val Pro Gln Asp Gln Gly Gly Leu Val Thr Glu Thr Ala
120 1 5 10 15
121 Asp Pro Gly Ala Gln Ala Gln Gln Gly Leu Gly Phe Gln Lys Leu Pro
122 20 25 30
123 Glu Glu Glu Pro Glu Thr Asp Leu Ser Pro Gly Leu Pro Ala Ala His
124 35 40 45
125 Leu Ile Gly Ala Pro Leu Lys Gly Gln Gly Leu Gly Trp Glu Thr Thr
126 50 55 60
127 Lys Glu Gln Ala Phe Leu Thr Ser Gly Thr Gln Phe Ser Asp Ala Glu
128 65 70 75 80
129 Gly Leu Ala Leu Pro Gln Asp Gly Leu Tyr Tyr Leu Tyr Cys Leu Val
130 85 90 95
131 Gly Tyr Arg Gly Arg Ala Pro Pro Gly Gly Gly Asp Pro Gln Gly Arg
132 100 105 110
133 Ser Val Thr Leu Arg Ser Ser Leu Tyr Arg Ala Gly Gly Ala Tyr Gly
134 115 120 125
135 Pro Gly Thr Pro Glu Leu Leu Leu Glu Gly Ala Glu Thr Val Thr Pro
136 130 135 140
137 Val Leu Asp Pro Ala Arg Arg Gln Gly Tyr Gly Pro Leu Trp Tyr Thr
138 145 150 155 160
139 Ser Val Gly Phe Gly Gly Leu Val Gln Leu Arg Arg Gly Glu Arg Val
140 165 170 175
141 Tyr Val Asn Ile Ser His Pro Asp Met Val Asp Phe Ala Arg Gly Lys
142 180 185 190
143 Thr Phe Phe Gly Ala Val Met Val Gly
144 195 200
147 <210> SEQ ID NO: 5
148 <211> LENGTH: 450
149 <212> TYPE: DNA
150 <213> ORGANISM: Homo Sapien
152 <400> SEQUENCE: 5
153 ccgctgaagg ggcaggggct aggctgggag acgacgaagg aacaggcggt tctgacgagc 60
154 gggacgcagt tctcggaagc cgaggggctg gcgctcccgc aggacggcct ctattacctc 120
155 tactgtctcg tcggctaccg gggccgggcg ccccttggcg gcggggaccc ccagggccgc 180
156 tcggtcacgc tgcgcagctc tctgtaccgg gcggggggcg cctacgggcc gggcactccc 240
157 gagctgctgc tcgagggcgc cgagacggtg actccagtgc tggacccggc caggagacaa 300
158 gggtagcggc ctctctggta cacgagcgtg ggggttcggc gcctggtgca gctccggagg 360
159 ggcgagaggg tgtacgtcaa catcagtcac cccgatatgg tggacttcgc gagaggggag 420
160 accttctttg gggccgtgat ggtgggggtga 450
162 <210> SEQ ID NO: 6
163 <211> LENGTH: 149
164 <212> TYPE: PRT
165 <213> ORGANISM: Homo Sapien
167 <400> SEQUENCE: 6
168 Pro Leu Lys Gly Gln Gly Leu Gly Trp Glu Thr Thr Lys Glu Gln Ala
169 1 5 10 15

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Input Set : A:\B129SEQLIST.TXT

Output Set: N:\CRF4\01072003\J040281A.raw

```

170 Phe Leu Thr Ser Gly Thr Gln Phe Ser Asp Ala Glu Gly Leu Ala Leu
171          20          25          30
172 Pro Gln Asp Gly Leu Tyr Tyr Leu Tyr Cys Leu Val Gly Tyr Arg Gly
173          35          40          45
174 Arg Ala Pro Pro Gly Gly Gly Asp Pro Gln Gly Arg Ser Val Thr Leu
175          50          55          60
176 Arg Ser Ser Leu Tyr Arg Ala Gly Gly Ala Tyr Gly Pro Gly Thr Pro
177 65          70          75          80
178 Glu Leu Leu Leu Glu Gly Ala Glu Thr Val Thr Pro Val Leu Asp Pro
179          85          90          95
180 Ala Arg Arg Gln Gly Tyr Gly Pro Leu Trp Tyr Thr Ser Val Gly Phe
181          100         105         110
182 Gly Gly Leu Val Gln Leu Arg Arg Gly Glu Arg Val Tyr Val Asn Ile
183          115         120         125
184 Ser His Pro Asp Met Val Asp Phe Ala Arg Gly Lys Thr Phe Phe Gly
185          130         135         140
186 Ala Val Met Val Gly
187 145
190 <210> SEQ ID NO: 7
191 <211> LENGTH: 156
192 <212> TYPE: DNA
193 <213> ORGANISM: Homo Sapien
195 <400> SEQUENCE: 7
196 ctggccttag tgccccagga tcagggagga ctggtaacgg agacggccga ccccggggca 60
197 caggcccagc aaggactggg gtttcagaag ctgccagagg aggagccaga aacagatctc 120
198 agccccgggc tcccagctgc ccacctcata ggcgct 156
200 <210> SEQ ID NO: 8
201 <211> LENGTH: 52
202 <212> TYPE: PRT
203 <213> ORGANISM: Homo Sapien
205 <400> SEQUENCE: 8
206 Leu Ala Leu Val Pro Gln Asp Gln Gly Gly Leu Val Thr Glu Thr Ala
207 1          5          10          15
208 Asp Pro Gly Ala Gln Ala Gln Gln Gly Leu Gly Phe Gln Lys Leu Pro
209          20          25          30
210 Glu Glu Glu Pro Glu Thr Asp Leu Ser Pro Gly Leu Pro Ala Ala His
211          35          40          45
212 Leu Ile Gly Ala
213          50
216 <210> SEQ ID NO: 9
217 <211> LENGTH: 17
218 <212> TYPE: DNA
219 <213> ORGANISM: Homo Sapien
221 <220> FEATURE:
222 <221> NAME/KEY: misc_feature
223 <222> LOCATION: 6
224 <223> OTHER INFORMATION: n = A,T,C or G
226 <400> SEQUENCE: 9
W--> 227 gtytenggct cytcytc

```

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RAW SEQUENCE LISTING

DATE: 01/07/2003

PATENT APPLICATION: US/10/040,281A

TIME: 16:14:13

Input Set : A:\B129SEQLIST.TXT

Output Set: N:\CRF4\01072003\J040281A.raw

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229 <210> SEQ ID NO: 10
230 <211> LENGTH: 17
231 <212> TYPE: DNA
232 <213> ORGANISM: Homo Sapien
234 <220> FEATURE:
235 <221> NAME/KEY: misc_feature
236 <222> LOCATION: 6
237 <223> OTHER INFORMATION: n = A,T,C or G
239 <400> SEQUENCE: 10
W--> 240 gtytcnnggtt cytcytc 17
242 <210> SEQ ID NO: 11
243 <211> LENGTH: 18
244 <212> TYPE: DNA
245 <213> ORGANISM: Homo Sapien
247 <400> SEQUENCE: 11
248 atgggggcac tggggctg 18
250 <210> SEQ ID NO: 12
251 <211> LENGTH: 19
252 <212> TYPE: DNA
253 <213> ORGANISM: Homo Sapien
255 <400> SEQUENCE: 12
256 gcggccgctt tagagcaca 19
258 <210> SEQ ID NO: 13
259 <211> LENGTH: 27
260 <212> TYPE: DNA
261 <213> ORGANISM: Homo Sapien
263 <400> SEQUENCE: 13
264 gacagtgata ggcaccgcca gcaacaa 27
266 <210> SEQ ID NO: 14
267 <211> LENGTH: 34
268 <212> TYPE: PRT
269 <213> ORGANISM: Homo Sapien
271 <220> FEATURE:
272 <221> NAME/KEY: VARIANT
273 <222> LOCATION: 7, 30, 31
274 <223> OTHER INFORMATION: Xaa = Any Amino Acid
276 <400> SEQUENCE: 14
W--> 277 Gly Leu Glu Gly Arg Gly Xaa Arg Leu Gln Gly Arg Gly Ser Leu Leu
278 1 5 10 15
W--> 279 Leu Ala Val Ala Gly Ala Thr Gly Leu Val Thr Leu Leu Xaa Xaa Val
280 20 25 30
281 Pro Ile
285 <210> SEQ ID NO: 15
286 <211> LENGTH: 25
287 <212> TYPE: PRT
288 <213> ORGANISM: Homo Sapien
290 <400> SEQUENCE: 15
291 Leu Pro Glu Glu Glu Pro Glu Thr Asp Leu Ser Pro Gly Leu Pro Ala
292 1 5 10 15

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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 01/07/2003
PATENT APPLICATION: US/10/040,281A TIME: 16:14:14

Input Set : A:\B129SEQLIST.TXT
Output Set: N:\CRF4\01072003\J040281A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:9; N Pos. 6
Seq#:10; N Pos. 6
Seq#:14; Xaa Pos. 7,30,31
Seq#:16; Xaa Pos. 1
Seq#:17; Xaa Pos. 1,5,6

VERIFICATION SUMMARY

DATE: 01/07/2003

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Input Set : A:\B129SEQLIST.TXT

Output Set: N:\CRF4\01072003\J040281A.raw

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:227 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0
L:240 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
L:277 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0
L:279 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:16
L:308 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0
L:325 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0